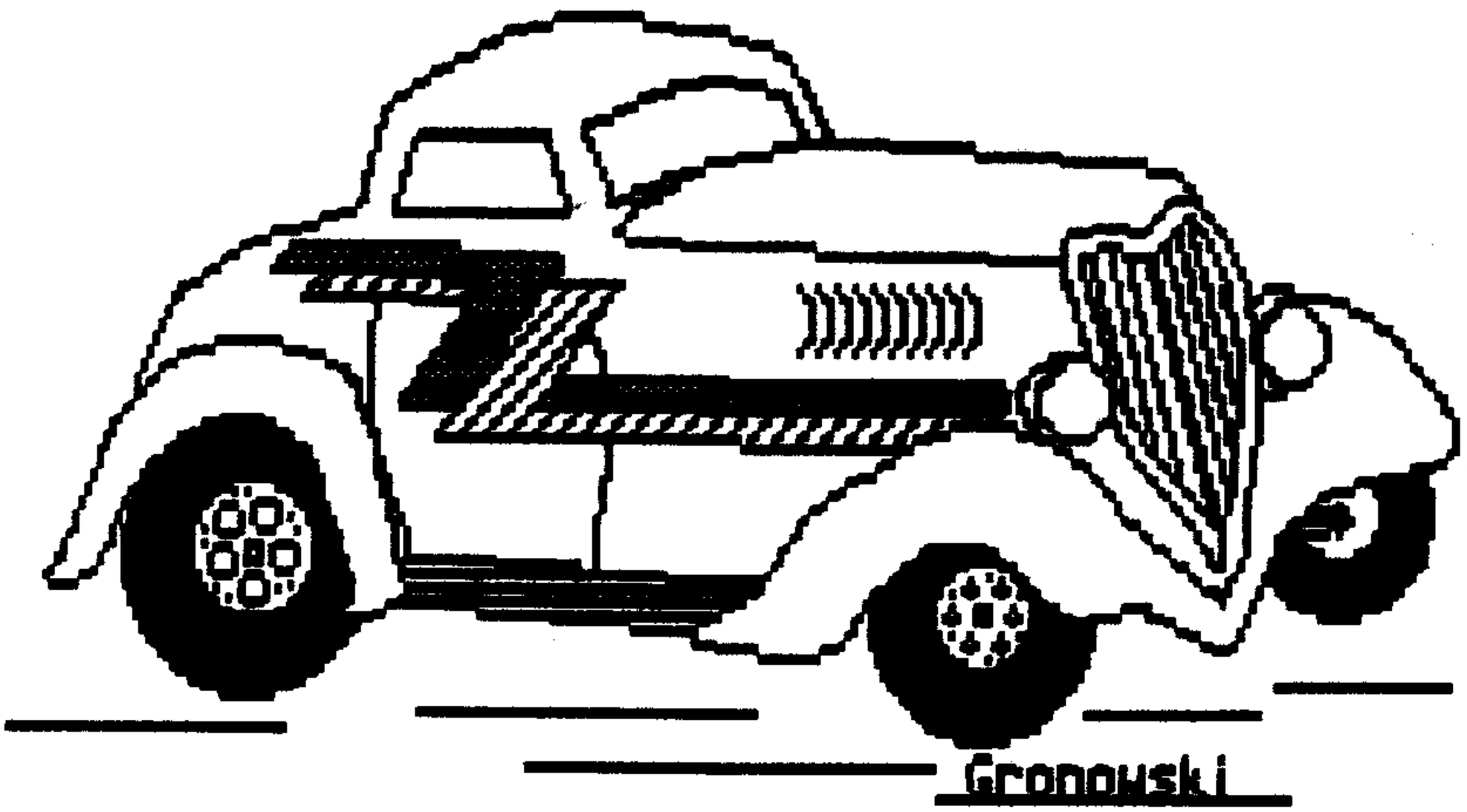
CHICAGO TIMES

NEWSLETTER OF THE CHICAGO TI-99/4A USERS GROUP

START YOUR PROGRAMMING CONTEST ENTRIES NOW

JAN. 31, 1988

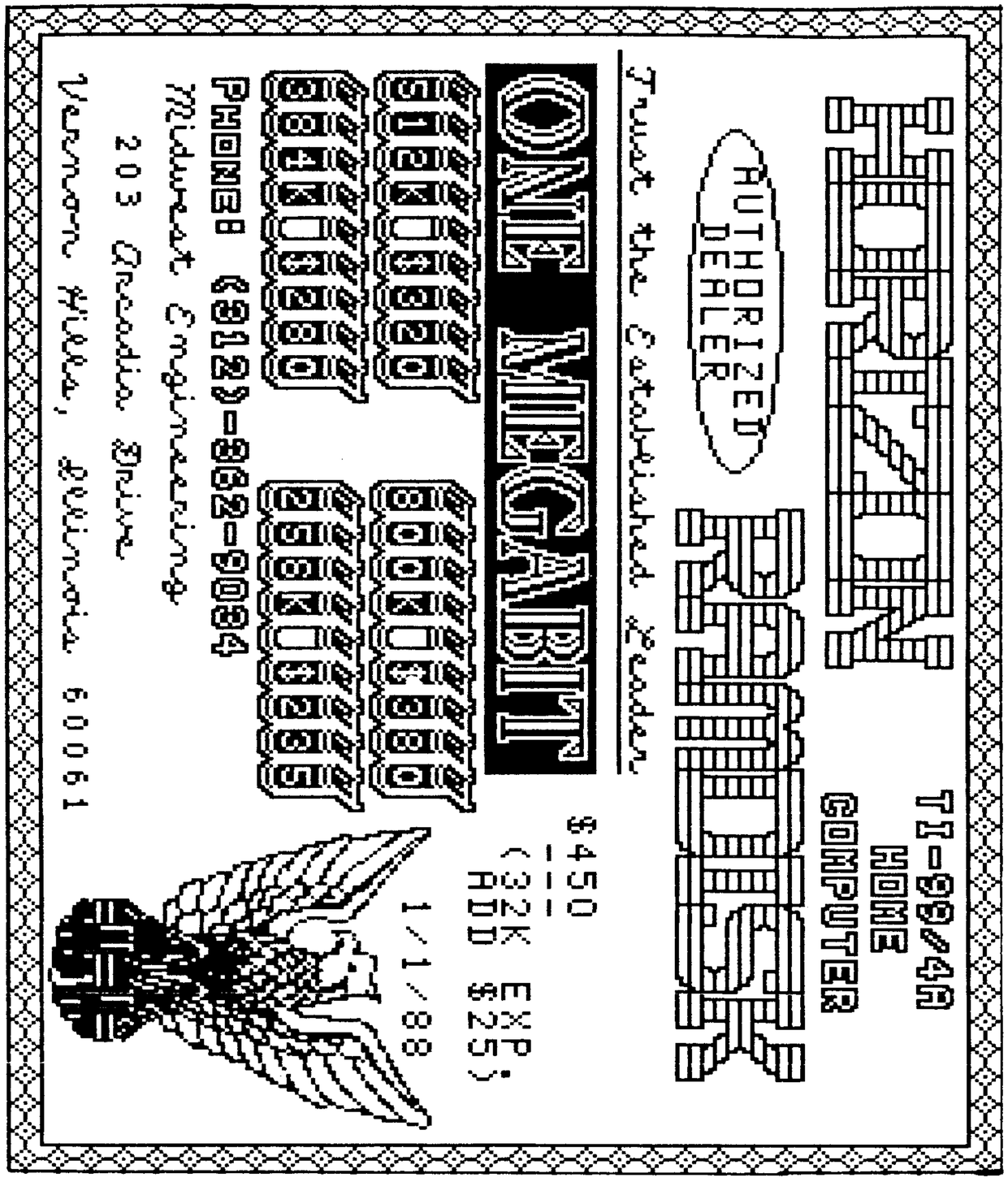
EDITOR: Carole Goldstein



Gronowski

THE FEBRUARY MEETING. . . .

will be held on Saturday FEB. 6, 1987 from 1:00pm to 3:00pm in the IRONWOOD ROOM at Triton College. Hope to see you all there.



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Thanks to Dennis Hathaway for his proofreading expertise.

BULLETINS:

UG HOT LINE NUMBER IS (312)657-1093.

MEETING DATES FOR THE COMING YEAR ARE AS FOLLOWS:

FEB 6, FIRESIDE LOUNGE	APRIL 2, FIRESIDE LOUNGE
MARCH 5, IRONWOOD ROOM	MAY 7

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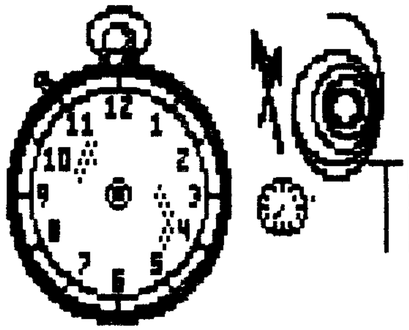

THE DISASSEMBLY

Dave Wakely

The new year; An ounce of prevention; The last meeting; Contest time; The crystal ball; Other THings:

It is when the holidays are over and the driveway has turned to ice and going outside for anything elicits a phobic reaction that home computing gets its greatest boost. This is the time of year when people spend the most amount of time at their 99/4As. Some will be learning a new software package, perhaps something they purchased at the Faire or received for Christmas. Others will be teaching their children how to use an educational program. Still others will be programming something for their own use or to share with others via their group library. Some may even be polishing up an entry for the group programming contest. And some will be wielding a soldering iron to attempt the latest hardware modification.

This is also a good time of year to take stock of your system and attend to its needs. This certainly includes maintenance. Older TI consoles (and aren't they all old by now?) are prone to chronic problems such as lock ups when cartridges are inserted. Besides giving the GROM port connector a thorough cleaning (both upper and lower connections), when the console is apart it is a good time to examine the insides for chips that may have partially walked themselves out of their sockets, and to examine solder joints. I have heard repeated cases of people who regularly clean the connectors, but still experience cartridge based lock ups. Many of these machines are suffering from cracked solder joints where the cartridge port interfaces with the main board. Someone could have a fairly lucrative side business fixing minor problems such as this for a reasonable fee. I know of no one in this area who is doing so, although I have heard of other TI User Groups where this is done by someone in the group.

The side port connector is also a source of problems for some, as are various cables to peripherals. For example, a few years ago I prevailed on a friend who is handy with a soldering iron to build me a cable for the side port connector so I could move the firehose plug out of the way. After several years of bending and jostling, apparently one of the pins came loose and was making intermittant contact. The result was occasional lock up which I couldn't trace. I once even took a continuity meter to the cable and it checked out okay. Only after checking everything else and then finally rechecking that cable did the problem turn up. One psychological result of this, however, is that I began to dred turning on the TI, fearing a frustrating session of lock-ups. It would not have been terribly difficult to decide to hang up the TI for good.

The cleaning advice that Al Stump gave one Faire back is well taken. A malfunctioning console is also a temptation not to use the machine at all, and threatens us with the loss of a member. The 99/4A and its peripherals

are actually quite well constructed compared to other units of the time. For example, Commodore 64 machines are famous for repeated failures, including a tendency to short out via static electricity from the user. I have never heard of this about an intact (console unopened) 99/4A. Perhaps the group owes it to itself to see that some type of reliable repair service is available to members. Being "on our own" certainly doesn't mean we are helpless.

I THOUGHT THAT WAS YOUR JOB!: It turns out there was a reason why there was no announcement about the last meeting in the newsletter. That was because no one knew what the heck we were doing. In a previous column I once explained the process of how the meeting presentations are arranged, and how that process occasionally goes awry. This was one of those times. It turns out that a planned printer demo had to be cancelled, and we were able to wing it fairly well and demo several things. The meeting was well-chaired by new group President Hank Ellermann. Among other things, it was announced that there will be five SIGs (Special Interest Groups) operating. They are: Pascal (Mike Maksimic); Beginners (Rich Klein); 9640 (Don Jones); TI-Artist (Maybe Buzz Krantz); and Business (Len Rovner). Not all of the details have been worked out. Watch the newsletter for specific announcements.

Bob Demeter rather belatedly (because there wasn't time to get it into the library) showed off a Christmas program that was a marvel of Extended BASIC graphics programming. The program is called "Woodstock" and concerns that "Peanuts" character's attempts to get a Christmas present from the top of Snoopy's doghouse over to his nest in the midst of a snowstorm. Suffice it to say that describing it doesn't do it justice. I believe I heard that it is on disk #102 in the library. Bob then followed this with a demo of the Geneve, specifically some loading options available with a RAM disk. In the midst of this Bob brought up the interesting finding that the Geneve has a 128K EPROM which so far apparently has nothing in it except that Swan logo which comes up when the machine is turned on. He stated that Myarc seems to have plans to eventually put the operating system in this EPROM. In the meantime, as some wise guy in the audience pointed out, Myarc is giving us the bird.

Rich Klein then followed with a demo of using the combination of a GRAM Kracker with a Horizon RAM disk and some of the unusual things which can be accomplished with this combo. It should be noted that Rich built his RD from a kit and reports that it took something like 960 solder joints to complete. Talk about steady hands.

After the demos Hank chaired a short Q and A session which quickly got to some of the problems the group BBS is having. It turns out there was a problem with the Practical Peripherals 2400 baud modem we recently added to the BBS. The company tells us that they managed to build it with a zenier diode in backwards, and this has now been corrected in our unit. If you have this modem, check with the company. Sounds like they should have had Rich Klein build it. Others apparently have problems because they are using a DAK "Smart Duck" modem. Some early versions of this modem also may have something wrong with them, while later ones work fine.

If you have been on the board recently then you are aware that it is recommended that you use Archiver Version 2.3 for up and downloading. Several people commented that there are no docs for this program on the board, and the process was explained. It turns out that once 2.3 is downloaded it needs to be first uncompressed, and then unpacked using

Version 2.11 of Archiver. The program loads from E/A option 5, or from XB with a Program Image loader. It sounds to me like if you are starting from scratch that you will need to download both Versions. I only hope that Version 2.11 isn't itself archived!

Finally, it was announced that Don Jones will be given a well-deserved rest and that Matt Mullin will be taking over as Membership Chair. If you have membership questions, it is probably best to address this to the Membership Chair in care of the group rather than to a specific individual. For now those inquiries will be going to Matt.

In the future we will try to have the agenda arranged ahead of time and announced here, if possible. For example, we are working on a demo of GIF graphics with the Geneve, but no date has been set for this. Maybe we can get that printer demo scheduled. Personally, I'd like to see what a laser printer can do when attached to a 99/4A, but then again I'd also like to HAVE a laser printer.

FREE MONEY: Now that I have your attention, you should know that our annual Programming Contest is now open. We have once again allotted $300 in prize money, to be split among several winners. In the first few years we did this, back in 1983 and '84, we had pre-announced categories such as Extended BASIC, Assembly, etc. In recent years, the number of entries has dropped dramatically, making categories meaningless if no one has entered anything in them. The rules are that this must be original code of your own in any language which runs on the 99/4A or Geneve. The program must be submitted on disk or tape to the group before the end of the March meeting, either in person at the February or March meetings, or by mail to the group mailbox. The label on the disk or tape MUST be clearly marked as a contest entry, must include your group membership number, and must indicate the language and any special loading instructions. Include your age if you are under 13 and entering in the "Junior" division, otherwise we will assume you are an adult. Use two labels if you have to, but get that information on the package if you want it considered. If possible, it is highly desirable that your program have a title screen which shows the NAME of the program. But DO NOT place YOUR name on either the label or in the program itself. We do not want the judging influenced by our opinions of your personality. After the judging we will figure out who you are by your membership number. Make sure that your disk or tape will load and run on a standard 99/4A (SSSD or DSSD disk format, 32K, etc.) or Geneve system! The winners must be members of the Chicago TI User's Group; agree to have their names published in the newsletter; to give a demonstration of the program at the April meeting (or to make adequate arrangements for such a demo to be conducted); and to submit the program to our group library.

In looking over the history of past winners, your best bet is to come up with something which has the greatest interest for the largest number of users. Super code which does nothing or something obscure may be well written, but it probably won't win anything. Instructions on the use of your program are vital. In the past we have had entries which were interesting-looking, but which we had absolutely no idea how to use or operate. INCLUDE INSTRUCTIONS, either within the program, or as a separate text file. Instructions on paper have a tendency to become separated from the program and lost. Last year we awarded 7 prizes, ranging from $75 to $25, as well as two disks to our winner in the "Under 13" division. This year, all prizes will be cash. There will be an "Under 13" prize if someone enters who meets that qualfication. Note that

we have always awarded all the money allotted. If there is only one entry, it will win $300. Most of all, good luck and get to work!

EEANIE-MEANIE, CHILI BEANIE: With the start of the new year, it is time for some predictions about the upcoming year in the TI world. The list is based on my observations of recent trends, taking them to their logical conclusions.

1. Someone will figure out a way to place an entire Peripheral Expansion Box inside the console. (Note: This goes a few steps further than the Chicago group member, who, a few years ago, put an entire expansion system inside a disk drive case.)

2. Before the end of 1988 Myarc will release Version 1.0001 of M-DOS, with promises of a completed, bug-free Version 1.1 "in the first quarter of 1989, or maybe 1990."

3. Myarc will also announce that they still occasionally think about producing an IBM compatibility card, but then they lie down and those thoughts quickly pass.

4. This newsletter will expand further, averaging 97 pages per issue. The editor will be admitted to a major Psychiatric facility.

5. The sixth annual Chicago TI Faire will be a success. We will estimate that 2,500 people attended. About 800 will actually show up.

6. Mechatronics will come out with some great new hardware which will do some amazing things. It will be vastly overpriced.

7. The Chicago Bears will win Super Bowl XXIII in January of 1989. This has absolutely nothing to do with the 99/4A, but that doesn't mean it isn't true.

8. Freeware authors will continue to complain that no one sends them any money, so they may have to stop writing for the TI. They will continue writing anyway. (Note: This doesn't relieve you of the responsibility to send something!)

9. Rich Klein, Dave Wakely, and Don Jones will write columns that can actually be read in one sitting. They will be invited to appear on the "Oprah Winfrey Show".

10. Everyone will think about starting their own TI bulletin board, and some will, while others will stop running their TI bulletin boards. Net result: About the same number of TI bulletin boards.

11. Someone will figure out a way to put an entire console in the Peripheral Expansion Box. But, in a major design flaw, this will also include the keyboard.

12. There will be continued rumors that someone will produce a 99/4A clone. Texas Instruments will deny it is them, and will hire back Bill Cosby to do the denial. Then everyone will believe it. (Note: New, wild rumors about this are continuing. Watch this space!)

13. Every TI owner will have every cartridge ever produced, and they will be on disk. Many will lose sleep worrying about being sued for copyright

infringement, but none will be.

14. There will be an increasing number of "starving Assembly language programmers sales" at local Holiday Inns, with framed source code listings suitable for hanging above your living room couch.

15. Someone will figure out a way to put an entire Peripheral Expansion Box in a cartridge. It will be known as a "Super-Duper Wowie-Zowie Cart", but unfortunately, it also causes your console power supply to melt.

16. An Assembly language programmer in a) Canada; b) Australia; or c) West Germany (take your pick), will come up with IBM emulation software for the 99/4A. It will run at .0007 Hz. A twenty cell Multiplan spreadsheet will recalculate in about a week and a half, give or take a few days.

17. An 11-year old who started with "Early Learning Fun" will master TI Assembly language in two weeks. A large group of adult users will begin plotting against him.

18. Someone will invent a robotic arm which cleans your console and resolders loose connections. However, it runs from a cartridge which regularly locks up the machine. It will also have a tendency to break down and will discover that it can't repair itself.

19. A very strange user will figure out a way to put an entire console in a cartridge, and, when he realizes the ramifications of this will be admitted to a major Psychiatric facility, only to re-emerge as the new editor of this newsletter.

20. We will all survive another year and renew our memberships in our local User Group.

There was more, but at this point the crystal ball locked up and I had to reboot.

SubrouTInes: We understand that group member Grant Schmalgemeier continues to have health problems serious enough to prevent him from attending meetings or doing the work with the newsletter and group mail he has handled for the past several years. Our thoughts and prayers are with him and we wish him a speedy recovery...Regina, Texincia Lubbock, Fanny Flannery, and now Geneva Gabor. What is it about this machine that induces individuals to turn into anonymous and occasionally obnoxious persons of the female persuasion?...Several expletives have had to be deleted from the minutes of Executive Board meetings concerning that new 2400 baud modem used on the group board. It seems several board members couldn't connect with it either. I understand that in addition to the hardware fixes noted above that some reworking of the code has been undertaken and Butch is confident that by now everyone should be able to get on line. Those who are still experiencing probems seem to include Geneve users and/or DAK users. Maybe the Duck isn't talking to the Swan...

From The Welcome Matt: Matt Mullen

Well, we are kissing January (and the Bears) good-bye for another year and the new officers and some new chairpersons and volunteers have "gotten their feet wet" in new capacities. This writer is full of questions (that hopefully will be answered) and is anxious to do what he can to serve and provide for the members of the Chicago Users Group. Don Jones has moved up the ladder and that
leaves me in a sea of confusion holding on to the bottom rung. I hope I don't get my fingers stepped on so I have to let go....

I was hit from every sides at the last meeting with requests: Add ZIP Codes, send information or applications, renew my membership, etc. I will do my best to get all of these things accomplished as soon as possible, but please be patient and give me a little time to find out how to get it done.

By the way, While looking over the sign-in sheets, I counted only 93 names. I am positive there were more people present... be sure to sign in as soon as you come in or get your equipment and what-ever situated. The name on the list means more than just being eligible for a door prize.

If you have any questions or want to volunteer to help on the Committee, feel free to write me.

MATT MULLEN
36 MONTROSE ROMEOVILLE, IL. 60441

If I don't know the answer, I'll do my best to get it as soon as possible for you. After all, they don't call me WELCOME MATT for nothing!!

WHY RGB: Jan Janowski

WHY R G B ?????

One of the most confusing dilemmas facing a computer user is the selection and purchasing a display card or monitor. "What's so wrong with my TI monitor or TV set?" you ask. I hope to explain to you not WHY you should buy one, but, at least, explain the technical reasons why your TI monitor (or TV set) won't work as well as an RGB monitor. We will also cover the different types of RGB monitors. I will refer to a television set often, as the t.v. set and the TI monitor are very similar.

First, lets cover our TI monitor... Our TI monitor is simply a t.v. set without a tuner, with separate inputs for audio and video. This is accomplished through the D.I.N. connector on the rear of the TI. (DIN is Deutsche Industry Norm German Technical Standards Group) The D.I.N. connector carries the +12v, ground, audio and video to your TI

monitor or r.f. modulator.

In order to explain why the TI monitor is not good enough for hi-res graphics, we need to engage in a short conversation about our television system, N.T.S.C.:

It is unfortunate that I inform you that our Television Standard, NTSC, (the system we use in America) is probably the WORST there is in the world. It was developed in the late 1940's - early 1950's in such a way that the color transmissions would not appear scrambled to the (then established) black & white television sets. Europe did not concern themselves with compatability, and developed the P.A.L. and S.E.C.A.M. color television standards. It is the NTSC technical design limitations that prevent our converted t.v. sets (even the ones with video inputs) from displaying good graphics. Our t.v. sets have one saving grace.... Being analog devices, they can resolve a tremendous amount of colors. The t.v. set takes that "encoded" video, breaks it down to R.G.B. signals, and displays it on the screen.

The first problem we encounter when we feed high-res pictures into our TI monitor, is the color burst filter. The color burst circuits, the circuitry that "turns on" the color information, in our t.v. pictures, must not be triggered inadvertantly by the video information displayed on the screen. To prevent this the video is NOTCHED OUT at and near the Burst frequency of 3.579545Mc. All video information that has a frequency near the burst frequency is removed, and is not seen on the screen. Furthermore, the Audio is transmitted 4.5Mc above the video, and we do not want the video beating against the audio, (you may have experienced this... a title goes in the picture, and you hear a buzzing sound until the title goes away). To avoid this buzzing, we will NOTCH OUT EVEN MORE INFORMATION FROM THE VIDEO. In t.v. sets, this is done in two places: In the RF areas of the tuner and in the video section, to keep audio from interferring with the video. As you see, your t.v. sets, and your TI Monitor really do not deliver to the screen all that is presented to them. This, in combination with the inherent flaws in the N.T.S.C. system (the "color crawl" between certain colors, and nearly all vertical lines), makes for an exodus from an encoded video system based on N.T.S.C.

"Then what do we use?" The answer is, RGB. Your next question may then be, "What is RGB?" It is 3 signals in parallel, each signal carrying information on just one color: Red, Green, and Blue. (Rather than go into additive and subtractive colors now, PLEASE TRUST ME when I say that all colors can be made up of red, green, and blue primaries.) In order so that we do not limit ourselves, or end up with a short term fix for our dilemma, (and have to purchase something new in a couple of years) let's look into what the limitations of RGB are:

TTL RGB is transmitted on three wires, and there is an additional wire which controls whether the color levels are HIGH or LOW. From this, you can mathematically determine the number of colors.... 3 (colors) X 2 (combinations of shadings) X 2 (intensities either High or Low) = 12 (different colors + black and white). Congratulations, you now are experts on the IBM CGA color standard! (I have simplified it, a bit)

So RGB has limitations, too? RIGHT! TTL RGB does, but ANALOG RGB has almost no limitations! Remember that your t.v. set is basically an RGB device after the "encoded video" is decoded, and the amount of

colors your t.v. screen can resolve is quite high, ONLY, if we have THREE SEPARATE ANALOG SIGNALS..... That also effectively INCREASES the mathematical possibilities of color combinations by 3! With todays TI and Myarc 9640, we cannot create full bandwidth signals on 3 simultaneous signals, (RGB), (by this I mean that we do not have the technology available to us yet to produce 256 different levels of R, G, B, information simultaneously from the display systems available now.) But, isn't it comforting to know that you are not up against a technical barrier, and you have room to improve with existing equipment?

There are other factors that you should know about. At this point, we have not altered the video scan rate. Our NTSC scan rate is 525 horizontal lines, repeated 60 times a second (60 times a second because we have 60 cycle power). ---- 525/60. Remember PAL? (a few paragraphs back) PAL's scan rate is 625/50 (Europe has 50 cycle power). SECAM is even better -- 719/50. The more lines, the better. With IBM style computers, scan rates have changed so much from one display formats to the next, that there are now monitors that sense the scan rate change, and they alter their electronics to adapt to the changing scan rates! There is no doubt that eventually we will break free of the 525/60 scan rate that we are tied to, and access better graphics.

The Myarc 9640 has a higher resolution display at our 525/60 scan rate. Its greator resolution is lost on our TI monitors and t.v. sets because its higher bandwidth signal (the smaller characters, with fast rise time edges) is being antenuated by the filters in the video circuitry of the monitor/t.v. set. This, (and the NTSC "chroma crawl") is why an 80 column screen looks as poorly as it does on a t.v. set or TI monitor.

It should be noted that even IBM style displays have "features" in them that are maddening. The IBM CGA (color graphics adaptor) is limited to 12 colors plus black and white. The VGA display card is not directly accessable by software written for CGA, and if a "patch" is added, the colors will not be any better due to the fact that the program was origionally written for CGA colors. The EGA standards (and the others now being developed cannot be used on CGA due to TTL RGB limitations, have different scan rates (so your monitor will not lock up, unless you have a Multi-Sync monitor mentioned above), is not 100% downward compatable with programs written for CGA and VGA. Then, there is my favorite, the Hercules Monochrome Graphics mode. It is easy on the eyes, with its green or amber screen, and its 720/348 scan would seem to be an obvious choice. BUT don't run software written for color cards (this includes most games) on it, because the display will not see the color information; the screen stays blank, and you can HEAR whats going on, but you cannot see it!!!! (However, if you must sit in front of a CRT for hours on end, this is the only way to preserve your eyes!)

As you can see, there is no one display system that is 100% perfect, but if you are looking for a way to go, ANALOG RGB is the most flexible at the present time. As you can see, even with Big Blue, the grass is NOT always greener on the other side!

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library shelf

— Bob Demeter —

Well here we are into the new year. Software and hardware still seem readily available for our dead machine. I should live on as long. Could you imagine what people would say? "But Bob, you died 5 years ago, please lay down and don't bother us any more." "Sorry Nell, I've work to do. I was created with a 16 bit processor. I may have died 5 years ago but I still have 8 bits left." Yeah, that's the ticket! Our TI's have resurrected onto the second half of their microprocessors. Yes, yes, we have achieved inmortality. Thankyou Dr. T.I. Frankenstein. (The T.I. stands for Totally Indestructable)

The Janurary meeting has come and gone. I must admit Hank Ellermann did an excellent job. This was Hank's first meeting as new president. Besides the normal demos, etc., Hank got the membership involved. There was time for questions and answers. Problems were discussed and information exchanged. This was one of the BEST meetings I ever attended. Congratulations, Hank. You are doing an outstanding job. Keep up the good work.

One of the new things we introduced at the Janurary meeting was a 9640 S.I.G. This S.I.G. is being spearhaeded by Don Jones. Don has owned his 9640 for some time and is a very capable user. I think you newer owners will really get something from this S.I.G. I have just one word of advise. There is a lot of software out there. I would advise everyone in the S.I.G. to use the same software. This way you will all be coming from the same place. I think this will make Don's job a little easier. As of Dec. 29, 1987 Myarc has released DOS 1.1, MyWord 1.1, GPL .98, and XBII 2.11. There are 2 different versions of the up to date, the 9640 Support library has all the latest software. All disks released by Myarc will cost $2.00 apiece. Besides electronic means, this may be your only way of getting this software. Myarc is planning a one time mailing of all 6 pieces of software. But, this will not happen till ALL the software is done. As soon as Advanced Basic and Pascal Run Time are complete, all registered owners will receive their updated software.

Just remember, DOS 1.1, GPL .98, MyWord 1.1 and XBII 2.11 are all in the library. The GPL disks contains Myarc's new disk manager. It will allow 9640 owners with Myarc disk controllers to copy 96K in 1 pass. The MyWord disk contains the completed MyWord word processor. It also contains the finished Multiplan files and CSAVE cartridge dump. MyWord now has 56K of memory and Multiplan has 41K. XBII 2.11 is a substitute till Advanced Basic is done. Included on that disk are the 2 corrected files for Video Chess. Sorry but Video Chess is copyrighted by T.I. We can not give you the rest of the files for the game. These 2 files are only for those owners of Video Chess that are having problems running it.

I have had people ordering the Multiplan dump and other cartridges like Plato. Sorry, but again these cartridges are copyrighted. I am not at liberty to sell these dumps. Whatever I have listed in the library is all I can sell. I can not give you anything more. I will upload an updated Fairware and 9640 Support library list to the group's BBS. If we have room, it will be posted in the newsletter. It will also be on disk. The disk can be purchased for $1.00.

Continuing with our 9640 discussion, I have 3 more programs. These 3 were demoed at the

Jan. meeting. But, for the sake of the non-attending members, I will discuss them here.

The first one I'll talk about I had trouble with at the meeting. I'll tell you why later. There was nothing wrong with the disk. It was operator error as usual. I call this one GEN/LOADER. It is a re-write of John Birdwell's super cart loader SCLOAD. What this program does is give you 3 pages of menues. From these menues you can load E/A 5 and E/A 3 programs with a single key stroke. Here is what you do. Boot your DOS and go into GPL. Now, for cartridge name, type DSKx.LOADER (where x= drive # containing GEN/LOADER). After LOADER and LOADER1 have loaded, hit F1 and F2. This protects >6000 and >7000. This is what I forgot to do at the meeting. If you don't protect those addresses, you'll over write them. Like I did. Once you've protected >6000 and >7000 hit enter. You will now see a menu. Hit 8 for page 2 and 9 for page 3. This menu can be changed by going to page 2 or 3 and hitting F8. After your changes are made, save it back with CSAVE. Another feature of this program is the ability to setup your RAM disk. After it has been set up, you can transfer files to it. You can transfer an entire disk or be selective about it. By using a sector editor, you can change the defaults of the RAM disk setup. Docs are included with the disk. They are very easy to follow. As usual, if you have problems, let us know. We'll try our best to get things going for you. Non-attending members can send me a S.A.S.E with your questions. I'll be happy to respond. GEN/LOADER can be yours for only $2.00. Don't forget your donation to the author.

Please remember to include postage with your orders. 1-5 disks is $1.00. 6 or more disks is $2.00 postage. I also forgot to mention the price for the Myarc software. It is $2.00 per disk. Also. please remember the new library address. Send it C/O Bob Demeter or the group. The address is P.O.Box 454 Whiting, Ind. 46394. All requests for orders, submissions to the library, complaints, comments or questions about the library should go to the above address. All non-library mail goes to the groups P.O.Box. It's P.O.Box 578341 Chicago, Ill. 60657

OK, here's another nice program. Ken Finto says it started out to be a directory lister. So, that's what it's called. DIR/LISTER will run on the 9640 or 4A with XBII. Docs are included on the disk and it is quite easy to use. Using your 9640 or 4A, load in XBII. DIR/LISTER has a file called LOAD so it should autoboot. You will now be able to catalog your drives. The program displays Diskname, sectore used and available, filename, type, length, date created and updated. That being done, Ken dicided to add another feature. How about a type and print feature like DM1000? Good idea he thought. But, he went 1 better. How about being able to list a whole mess of files to type AND print? GREAT!!! So, DIR/LISTER does that too. Just catalog your disk. Use the up/down arrows to locate a file. type T for TYPE and P for PRINT. After assigning commands to all you D/V 80 filenames, hit FCTN 5. This will bring up another menu. Hit #2 to process disk. The program will go down the directory and TYPE or PRINT each file as directed. Can you think of a better way to check out your D/V 80 files? I think it's a great idea and a very fine piece of work. Thanks, Ken. DIR/LISTER is fairware so don't forget your donation. It's in the library. As usual it will cost $2.00.

<breathe> OK, let's move on. The next program is really sharp. Mr. Hallett put a lot or work into this one. He has taken some MS-DOS commands and used them with the 9640. He has managed to add BATCH files with some re-written GRAM files. The result is fantastic. All you have to do is add some of your files to the ones provided. This will give you one heck of a systems disk. I put mine on a HRD and it's super. Docs are included as usual and are easy to follow. DOS will boot and tell you which drive is the built in RAM disk. Besides telling you that HRD = drive F it tells how much disk and memory space are used and available. Hit any key. Now you have a menu. The menu gives you 7 options. 0 for DOS, 1 for TI MODE GPL (special GPL), 2 for MONO monitor, 3 for COLOR, 4 for MyArt, 5 for DEBUG and 6 for GIF2. The GPL, MONO and COLOR files are provided. You must add our own version of the others. Because the GRAMS have been re-written, you will be in for a surprise when you get into the TI MODE. Or, should I

Load cartridge, you'll find another menu. E/A, DM1000, MyWord, Run Pgm Image file, Geneve Utils, and Menu. The Geneve Utils option runs another program of menues. Set the clock, run E/A 5 pgms., Shorten GRAM files and Print. If you choose the MENU option, you will see John Johnson's menu program. You'll see 1 for disk directory, 2 for display file, 3 for run program. By hitting the space bar, you will have a total of 15 other options. 4 of these have been filled in for you. The author has thought of just about everything. I started using it this week and I love it. Ed has not provided us with his address. But, I will try to find it. I think he deserves a donation for this fantastic piece of work. This one will be in the 9640 Support library. I'll name it GPL/MENU. The cost will be $4.00. You can't go wrong with this one.

Well, I was gonna write about more programs. But this article is beginning to look like a Super Summer issue. I have enough programs to make disks 103, 104 and 105. I'll have to talk about them next month. 2 of these disks will be programs I mentioned in Dec. They are from Ray Kazmer. The other is our 1987 programming contest winner SCREEN HELP by Oscar Bretana. I'll have lots to say about these and others in Feb. Till then, Happy Valentines Day to everyone. And a big big kiss to all you sweethearts out there from Big Bad Bob. 73's and 88's
XOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXOXO

SOFTWARE REVIEWS: Paul Farber

January 1988-This month I would like to tell you about some products produced by TRIO+ Software (P.O. Box 115, Liscomb Iowa 50148 515-496-5455). Some of you may already know TRIO+ from their ART CONVERT and DISK ENVELOPER I programs which convert TI Artist Instances (or Pictures that you have converted into Instances) into a transliteration file that will let you insert these Instances into your TI-Writer documents and produce custom envelopes containing a catalogue of your disk respectively.

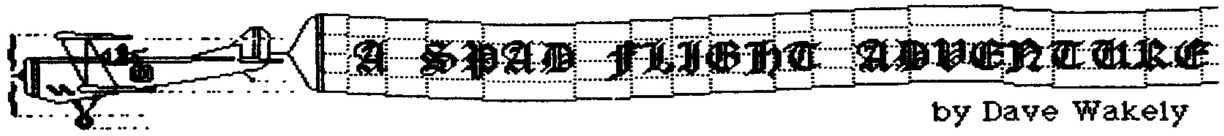
At the Faire I purchased a copy of their offering entitled "PRINT WIZARD," a TI product that promised many of the same features as PR*NTSH*P does for the IBM. Those of you who aren't familar with either of these products don't realize what you have been missing. This lets you print out greeting cards (properly done so that the inside and outside will be both upright after folding), posters, banners, and letterheads. Well, I took the program home and fired it up and, up to a point, it seemed to work fine. Unfortunetely, the part of the program that didn't work was the print routine. After some fooling around with the program (Okay, I used DM-1000 to remove the Extended Basic Protection) I discovered the problem. Although written for the Epson printer it is using a later developed printer code that allows for 80 dots per inch. Most of the older Epson printers don't possess this code and can only access ESC K (60 dots per inch) or ESC L (120 dots per inch). The result of this is that (after changing the print code in the program) your printout comes out either 6 inches wide (a little small for a greeting card after folding) or 12 inches wide (even tougher when your printer is using 8-1/2" wide paper).

BUT, TRIO+ is one of those rare companies who not only listen to customers comments but, when they see a problem with one of their

products FIXES it. As you may have realized from one of Carole Goldsteins' comments a month or two ago, I was not the only one with the printer problem. Carole and I had both talked to Barb Berg TRIO+'s chief programmer and WITHIN 10 DAYS I had two new disks in my hot little hands. One of them with the corrected Print Wizard programs and the other with the corrected graphics and font files that TRIO+ had to fix. The new Print Wizard program works fine and does everything that it promises to; greeting cards, banners, letterheads, posters, plus the ability to convert fonts and instances from TI Artist format into Print Wizard format. This later ability will let you take all of those fonts and instances that you may have stored on disk and make up some pretty neat looking products. The program auto-loads under Extended Basic and is completely menu driven and easy to use. Several fonts are provided on the data disk ranging in size from small to large plus about two dozen graphics. Depending upon the size of the graphic and its' orientation Print Wizard gives you the option of small, medium, or large printout and (if you select a small or medium sized option) the posssibilty of placing the graphic several places on the printout.

Only one small problem with the program is the speed of the final printout itself. I'd almost swear that I could do the printing by hand and it would be just as fast. If someone out there is an ace programmer in Assembly and wants to take the time it would be deeply appreciated. I am sure that if you have some ideas for speeding up the printout your contacting Barb Berg, at the above address, would be a benefit to the TI community. Although slow the final printout is worth the wait and you will have some pretty nice printouts to send to your friends or post up in order to sell something. One change that I would like to see made to the program is the ability to save off the information from a card, banner, etc. for reuse in the future.

Two other TRIO+ Software products that I want to mention before ending the column for the month are their ART DATA disks. There are two SSSD disks in each set packed with slides, fonts, and instances for your TI Artist pictures. Garfield, Odie, and a whole set of 3D slides that you can use to spruce up your pictures. Remember that if you have, or get, TRIO+ ARTCONVERT program you can also use these disks to enhance your TI Writer printouts with perhaps a nice logo for your stationary. So, till next month, remember to invest a few of your $$ for some good software and patronize those vendors who support your TI computer. And some especial thanks to TRIO+ Software for a company who listens to their customers.



Spadventure #4: Le petit ville de Soissons

I hope you all survived the rather severe engine problems of Spadventure #3 and got down safely. This time, we are going to venture a little further out, and explore one of the "villages" which are listed on the map. If you like, you can imagine that this is a reconnaissance mission to scout enemy strength. Or, if the current spirit of glasnost has gripped you and you prefer to skip the war scenario, you are free to imagine that you are a European out for a Sunday spin in your private aircraft. As with the other Spadventures, if you follow my lead on these trips, you should see and experience the things described below. But reaction times differ and things do not always work exactly the same way twice, so expect that sometimes things will not appear precisely as described. If you are reading these directions while flying (which is preferred), and you are flying the Mark 2 version, use the "M" key to stop if necessary, then when you understand what you are going to do next, use the "5" key to proceed. It sounds more complicated than it is. If you stay with me we should get to our destination eventually.

Start, as always, with the pre-flight check-out from Spadventure #1. When everything looks good, power up and take off at full throttle. Maintain this steep climb right up to 1,000 feet, or one full revolution on the altitude gauge. When the white hand on this dial comes back around to "0", the black hand will jump to indicate 1,000. Then power down two clicks ("7" key). Since we were at full throttle (1200 RPM) and reduced by two, we are now at 1,000 RPM, which will still leave us in a gentle climb. Immediately begin a small right turn by applying right aileron. A couple of presses should do it, because your direction should be NNE, or the first stop of the needle on the compass as it moves right. Continue climbing on this heading until you reach 2,500 feet, which will take some time, then reduce power two more clicks to 800 RPM. To obtain this precisely, if you wait until the indicator hits the first spot past 2,500 when you reduce power, when things settle down you should be sitting right on the mark. Our last maneuver for a while is to now change heading back to straight north by executing a gentle left turn. If all went well, your airspeed is now 110 or 120, you have a little more than 3/4 of a tank of gas, your altitude is exactly 2,500 feet, and you are heading straight north. If you look back, the home airfield is no longer in sight. Take off your instrument view, you won't need it for some time.

Now we can relax a little. Looking around, there isn't much of anything to see here, so there's time for a little background info. You can keep flying while you read, but be sure to check the screen periodically. Where we are headed is the village of Soissons, which, if you look at the map on the back page of the manual, is north and slighly east of the home airfield. Those of you who are historical and/or geographical purists have by now realized that the map included with Spad XIII is not quite accurate. In fact, if you have been tempted to obtain an actual map of this area to

use with the simulator, I'm not sure that's a good idea. Things are not likely to be in the correct places.

For example, in the simulator the Seine River runs, according to the manual, "infinitely north-south". In actuality, the Seine runs roughly southeast to northwest, from the higher land southeast of Paris, emptying into the English Channel near Le Havre. Of course, a good deal of the topography is missing from the simulator. For example, our present course should, right about now, be taking us between Belleau Woods and Chateau Thierry, which is on the Marne River (also not seen in the simulator). These were the sites of some of the initial action by American troops in 1918, and where heavy casualties were suffered as well.

If you have wandered a little too far east you may be able to make out the trenches off your right wing at this point (no cause for alarm if this is true). In the simulator the trenches also run infinitely north and south. This is roughly the way it was in the north of France, but at the Marne river, for most of the war, the lines extended more east-west. This was partly a result of the German war plan. They never intended to start a protracted world war. In 1914 the Germans were convinced that they could force a French surrender in four to six weeks. Their plan was to sweep west across Belgium and northern France, then south, cutting off Paris. The closest they came was about 23 miles from Paris, and when the resistance proved much stiffer than they had imagined, four years of stalemate followed.

In place of some of the absent scenery, what you can see if you are flying the Mark 2 version of Spad are the "perspective lines" on the ground below, which were absent from the original version. They help maintain a sense of the "depth" of vision. All of them also run north-south in the simulator, and hence you can also use them as a navigation aid. These "lines" (actually they are black and white columns (rows?) of dots), are not in random positions, they are fixed. For example, there is one just east of the home airfield, and it turns out that the village of Soissons is directly on the line just east of that one.

Some time between 6 and 7 minutes after the last turn (to straight north), the village will pop up right on the perspective line. Partly for this reason it may be somewhat difficult to see at first, appearing as just a darker dot. Nevertheless, this is it. If you could see the trenches on your right, it will definitely be to the left of center. If you never spotted the trenches, it will probably be on the line to the right of center. Perhaps you are even flying right over the perspective line. As soon as you spot it, use left or right aileron to get it centered on the screen, then put on your instrument view and take off 4 clicks of power, down to 400 RPM. The village should appear in, or just above, the gunsight.

There's no need for frantic action at this point. Due to our altitude, airspeed, and the distance to the town, it should remain about where it is on the screen without much attention from you. What you could do at this point is to get yourself right on the perspective line heading into town. This will mean using aileron and/or rudder to get lined up, but take your time and don't make any sudden moves. This will give you some practice in anticipating your turns for an approach. When the altitude gauge has wound down to 1,000 feet, forget any further corrections if you aren't yet lined up. Now is the time to press the down elevator key (E) twice, and take off two more clicks of power. This will cause things to happen somewhat

faster. When your altitude reaches 300 feet, begin pulling back on the stick and getting ready for landing. The town should still be some distance in front of you. If you can land on the perspective line, great, if not, it's no big deal. If you don't know how to land by now, you should be back doing Spadventures #1 and #2 instead of this one.

When you are on the ground we are going to use the taxi technique from Spadventure #2 to roll into town. From a stop, power back up to 600 RPM, which will soon get you rolling at about 30 MPH. Use the rudder keys to get on the line into town. From this perspective, the town looks to me like a joystick sitting on a table. No kidding. As we get closer that stick is beginning to look like a radio tower or something, except I am pretty sure there were few such towers in small towns in 1918. As the town gets still closer it will grow in definition, and it will soon become clear that the tower is, as the manual notes, a church steeple. Beyond this, however, this doesn't look like many towns that I have seen. Just before you get there, when the village almost fills your forward view, press the "0" key to come to a stop. What you will apparently see is that there is nothing here except these...well, I will let those of you who have flown here decide what this looks like, except to note that it reminds me of a children's playground where someone has stolen all the seats, at that!

Could this be it? In the immortal words of Peggy Lee, "Is this all there is?". Yes, this is it. You were expecting maybe rows of clapboard houses with friendly Frenchpeople waving at you from gabled windows? The manual notes that the graphics in the simulator are "stylized". I guess this is what they mean. The town sure seems deserted, though. Let's see, if this is 1918 then the front is around here somewhere and maybe everyone left to avoid the advancing hoardes. Or maybe, as the combatants in WWI were known to do, the town was sacked and everything of value was stripped for the "war effort".

Your report when you get back will have to include the information that Soissons is quiet and unoccupied at present. For now, get back up to taxi speed and head right down the main street of town, observing the "buildings" to your left and right as you go. Continue until you leave the village on the other end and have traveled a short distance out of town. Now, use the taxi techniques you learned earlier to turn around (a 180 degree turn) and head back again. We are going to use "Main Street" as a runway for our take-off. As an optional exercise, note that this town has only two streets, the north-south one we landed on, and an east-west street. If you like, instead of just turning around, complete three 90 degree turns, either right or left, to taxi through town on the other street. Use various views from the plane to observe how the three-dimensional buildings change perspective as you move around them. Once you have done this, get yourself back north of town again.

Now, get lined up with the street, facing south, and go to full throttle through the town. You won't disturb anything except possibly some random chickens or household pets which may have been overlooked in the evacuation. As you lift off, use the "4" key to look back and see the town receeding behind you. This is a nice view of the entire village. Consider also that the residents of Soissons are lucky. It looks like they will have something to go back to. By the time the war ended, hundreds of millions of dollars (1918 dollars at that) of damage had been done to France. And if you think that was bad, you should have seen Belgium.

Those of you flying the Mark 2 version will be able to use the "perspective

lines" as your guide back home. I leave it up to you to head west whenever you want, at whatever altitude you want. When you find the next line west of here, head south along it and the field will pop up just west of that line. This will take some time, so you can take off the instrument view and observe things like how long it takes for the village to shrink and disappear from view, among other things. What I have done is to make a photocopy of the map in my manual and I used a straightedge to draw in the north-south perspective lines over it. I drew one just east of the home field, and another that goes through Soissons, as well as a few others. We don't have a "radar" function in Spad XIII, but this technique has so far worked surprising well in keeping me from getting lost. This also means I can look at the map and at the instrument page at the same time without having to flip to the back.

Those of you with the original Spad XIII will have to reverse the directions for getting here, but this is not especially difficult. When working with this version I use the map and my compass, which gives me my heading, to find my way. The "gaps" between landmarks such as villages and the airfield aren't all that great, and I "point" myself in the direction I want to go. This usually leaves me wondering if I will be able to find the airfield if I am a few degrees off, but the size of the "operational area" makes it fairly forgiving of this. You will just have to keep checking ahead, and over your left and right wings to find things sometimes.

In either case, when you get to the field, try for an "on line" landing. It is easy in Spad XIII to get lazy and assume that since the ground is flat that you can put it down "near enough" to call it a landing. Your objective is to touch down and eventually stop as close as possible to the center line of the runway. Who knows, some day this skill could come in real handy.

The Basic Assembler: By Steve Peacock

THE BASIC ASSEMBLER #16 By Steve Peacock

MULTICOLOR MODE

When I started to write this column for our newsletter , I stated that I would not present a game or utility. Only short ideas would be done, that you could use to create your own longer program. This month I am presenting a stand alone program. It did not start out that way, but I just kept adding refinements to it and a complete program, demonstrating multicolor mode, is the result.

In the multicolor mode the screen is made up of 48 row of 64 columns. Each of these blocks are 4 pixels by 4 pixels. One of the best things is that each of the blocks can be any of the 16 colors that the TI computer can make. Also if you want to use sprites, you can. The color of every two boxes are described by one byte.

The first thing you must do, when using multicolor mode, is number the rows of the screen. In the first four rows the columns are numbered 0 to 31. The next four rows are numbered 32 to 63. This continues for a total of six groups.

```
 ROWS   SCREEN POSITIONS
  1-4    0   1   2.............29  30  31
  5-8   32  33  34.............61  62  63
 9-12   64  65  66.............93  94  95
13-16   96  97  98............125 126 127
17-20  128 129 130............157 158 159
21-24  160 161 162............189 190 191
```

In the multicolor mode, the Pattern Descriptor Table stores the color of the block, not the character pattern. This table starts at >0800 and ends at >0E00. If you wrote the color transparent to each of these addresses, the screen would clear.

To put the TI computer in the multicolor mode, write >E8 to VDP Write only register number one. This is done with the command -LI R0,>01E8-.

Now that the TI computer is in the multicolor mode and you have set up a screen numbering system, you must find the correct byte on the screen. If your starting row value was 12 and starting column value was 27, here is how you would calculate the correct byte:

```
Y=COLUMN (27), X=ROW (12)

A=Y/2          A=13.5
B=INT(Y/2)     B=13
C=A-B          C=.5
D=X/8          D=1.5
E=INT(X/8)     E=1
F=D-E          .5
G=>0800+E6+B*8+F   G=2408.5
```

This is the position in the Pattern Descriptor Table. Next you must determine if you need to change the left or right digit. If the value in F is zero, then change the left digit if not change the right digit.

I have introduced two new commands this month. The command ANDI stands for AND Immediate. When this command is used to compare two words the bits that are set in both are set in the new word. For example if register 9 has the value of >E318 (1110001100011000d) and you ANDI it with >2619 (0010011000011001d) the result will be:

```
   ANDI R9,>2619
    >E318  1110001100011000
    >2619  0010011000011001
Register 9 will now contain:
    >2218  0010001000011000
```

The other command A stands for Add. The command A R8,R9 will add the value in register 8 and the value in register 9 and put the answer in register the second register (9). If register 8 holds >E401 and register 9 holds >108C the command A R8,R9 results in >E401 plus >108C. The answer is put in register 9, so register 9 now holds >F48D. The value in register 8 is left unchanged.

Please note that the A command adds words (registers or a value at an address). The command AI will add a number to the register.

```
 A==> A R4,@>E09A
      A R4,R5
AI==> AI R4,31
      AI R4,>20
```


This months Basic Assembler starts out by turning the screen black and going into text mode. This is done to set up the screen. Next the screen positions are numbered. Then the Pattern Descriptor Table is cleared to transparent. This loop is also used when you want to clear the screen from the program.

The main loop scans the keyboard for the following keys: W, E, R, S, D, F, Z, X, C, 1, 2, and 3. The letter keys are used to draw on the screen. The number keys are used like this: 1 to change screen color, 2 to change block color, and 3 to clear the screen.

The loop DRAW is the place that computes the location in the Pattern Descriptor Table. If you follow it statement by statement you will find it is the same as I have described above.

One last thing. I have put in a label 'RELAY'. This is used because the program must jump more than >100 bytes 256d. All the 'RELAY' is used for is a double jump.

```
##############################################################################

100 REM PROGRAM BA16B-->Basic Assembler #16 Basic Version
110 REM MULTICOLOR MODE
120 REM (C)1986 S. PEACOCK
130 PRINT "NO BASIC COUNTERPART FOR    MULTICOLOR MODE."
140 PRINT
150 PRINT "USING EXTENDED BASIC YOU CANSEE WHAT MULTICOLOR MODE IS LIKE. IN COMM
AND MODE TYPE:"
160 PRINT "CALL LOAD(-31788,232). THEN PRESS ANY KEY. TO EXIT TYPE CALL LOAD(-31
788,224) (YOU"
170 PRINT "WILL NOT SEE ANYTHING BUT   COLORED BOXES). THEN PRESS  ENTER."
180 END

##############################################################################

*****************************************************************************
*
*PROGRAM BA16A-->Basic Assembler #16 Assembly Version
*MULTICOLOR MODE
*(C)1986 S. PEACOCK
*
*****************************************************************************
       REF  VSBW,VWTR,KSCAN,VSBR
       DEF  START
START  CLR  @>8374        *SETUP KEY SCAN
       LI   R0,>0711      *MAKE SCREEN BLACK ON BLACK
       BLWP @VWTR         *BY WRITING >11 TO WRITE ONLY REG 7
       LI   R0,>01F0      *PUT IN 40 COLUMN MODE BY
       BLWP @VWTR         *WRITING >F0 TO WRITE ONLY REG 1
*************************START OF SCREEN INITILIZATION
       CLR  R0            *SCREEN POSITION IS THE START
       LI   R7,6          *THERE WILL BE 6 GROUPS OF 128 BYTES
       CLR  R5            *REG 5 WILL HOLD VALUE TO BE WRITTEN
LP1    LI   R3,4          *THERE ARE 4 LINES IN EACH GROUP
LP2    LI   R4,32         *THERE ARE 32 CHARACTERS ON EACH LINE
       MOVB R5,R1         *THERE IS MORE TO BE WRITTEN
LP3    BLWP @VSBW         *BRANCH TO VSBW
       INC  R0            *SCREEN POSITION IS INCREASED BY ONE
       AI   R1,>0100      *ADD ONE TO THE VALUE TO BE WRITTEN
```

```
       DEC  R4            *DECREASE THE BYTES TO BE WRITTEN TO THE LINE
       JNE  LP3           *IF NOT AT THE END OF THE LINE STAY IN LOOP LP3
       DEC  R3            *DECREASE THE NUMBER OF LINES IN THE GROUP
       JNE  LP2           *IF ANY LINES ARE LEFT, STAY IN LOOP LP2
       AI   R5,>2000      *START THE NEXT GROUP 32d LARGER
       DEC  R7            *DECREASE THE NUMBER OF GROUPS
       JNE  LP1           *IF GROUPS LEFT STAY IN LOOP LP1
*************************CLEAR ALL BOXES TO TRANSPARENT
CL     LI   R0,>0800      *START OF PATERN DESCRIPTOR TABLE
       CLR  R1            *>00 IS TRANSPARENT
LP4    BLWP @VSBW         *BRANCH TO VSBW
       INC  R0            *INCREASE POSITION TO BE WRITTEN
       CI   R0,>0E00      *>0E00 IS THE END OF THE PATTERN DESCRIPTOR TABLE
       JNE  LP4           *IF NOT REACHED STAY IN LOOP LP4
       LI   R0,>01E8      *>E8 TO WRITE ONLY REGISTER 1 SETS MULTICOLOR MODE
       BLWP @VWTR         *BRANCH TO VWTR
       SWPB R0            *SWAP BYTES IN REG 0 =>E801
       MOVB R0,@>83D4     *MOVE LEFT BYTE OF REG 0 (E8) TO >83D4
       LI   R3,32         *COLUMN STARTING POSITION
       LI   R4,24         *ROW STARTING POSITION
       LI   R5,>0001      *STARTING SCREEN COLOR (BLACK)
       LI   R14,>9000     *STARTING BLOCK COLOR (LIGHT RED)
************************
*      MAIN LOOP         *
************************
LL     LIMI 2             *FCTN QUIT
       LIMI 0             *WILL WORK
       LI   R13,>2000     *DELAY LOOP TIME BETWEEN PRINTING A BLOCK TO SCREEN
       DEC  R13           *INCREASE OR DECREASE AS YOU LIKE
       JNE  $-2           *
       BLWP @KSCAN        *KEYBOARD SCAN
       CLR  R1            *CLEAR REG 1, WILL HOLD THE ASCII OF THE KEY PRESSED
       MOV  @>8375,R1     *PUT THE ASCII OF KEY PRESSED INTO RIGHT BYTE OF REG 1
       CI   R1,83         *COMPAIR IT TO 83 (S KEY)
       JEQ  LEFT          *IF EQUAL JUMP TO LEFT
       CI   R1,68         *COMPAIR IT TO 68 (D KEY)
       JEQ  RIGHT         *IF EQUAL JUMP TO RIGHT
       CI   R1,69         *COMPAIR IT TO 69 (E KEY)
       JEQ  UP            *IF EQUAL JUMP TO UP
       CI   R1,88         *COMPAIR IT TO 88 (X KEY)
       JEQ  DOWN          *IF EQUAL JUMP TO DOWN
       CI   R1,49         *COMPAIR IT TO 49 (1 KEY)
       JEQ  SC            *IF EQUAL JUMP TO SC (SCREEN COLOR)
       CI   R1,50         *COMPAIR IT TO 50 (2 KEY)
       JEQ  BC            *IF EQUAL JUMP TO BC (BLOCK COLOR)
       CI   R1,51         *COMPAIR IT TO 51 (3 KEY)
       JEQ  CL            *IF EQUAL JUMP TO CL (CLEAR SCREEN)
       CI   R1,82         *COMPAIR IT TO 82 (R KEY)
       JEQ  UPRIT         *IF EQUAL JUMP TO UPRIT
       CI   R1,87         *COMPAIR IT TO 87 (W KEY)
       JEQ  UPLEF         *IF EQUAL JUMP TO UPLEF
       CI   R1,90         *COMPAIR IT TO 90 (Z KEY)
       JEQ  DNLEF         *IF EQUAL JUMP TO DNLEF
       CI   R1,67         *COMPAIR IT TO 67 (C KEY)
       JEQ  DNRIT         *IF EQUAL JUMP TO DNRIT
       JMP  LL            *IF ANYOTHER KEY PRESSED, STAY IN MAIN LOOP
************************
LEFT   DEC  R3            *MOVE PRINT POSITION 1 TO LEFT
```



```
       CI   R3,-1         *CHECK TO SEE IF OUT OF BOUNDS
       JNE  DRAW          *IF NOT, JUMP TO DRAW
       CLR  R3            *IF OUT OF BOUNDS, RESET
       JMP  DRAW          *
************************
RIGHT  INC  R3            *MOVE PRINT POSITION 1 TO RIGHT
       CI   R3,64         *CHECK TO SEE IF OUT OF BOUNDS
       JLT  DRAW          *IF NOT, JUMP TO DRAW
       LI   R3,63         *IF OUT OF BOUNDS, RESET
       JMP  DRAW          *
************************
UP     DEC  R4            *MOVE PRINT POSITION 1 UP
       CI   R4,-1         *CHECK TO SEE IF OUT OF BOUNDS
       JNE  DRAW          *IF NOT, JUMP TO DRAW
       CLR  R4            *IF OUT OF BOUNDS, RESET
       JMP  DRAW          *
************************
DOWN   INC  R4            *MOVE PRINT POSITION 1 DOWN
       CI   R4,48         *CHECK TO SEE IF OUT OF BOUNDS
       JLT  DRAW          *IF NOT, JUMP TO DRAW
       LI   R4,47         *IF OUT OF BOUNDS, RESET
       JMP  DRAW          *
************************
UPRIT  DEC  R4            *MOVE PRINT POSITION UP 1
       CI   R4,-1         *CHECK UP FOR OUT OF BOUNDS
       JNE  N1            *IF NOT, CHECK RIGHT
       CLR  R4            *IF IS, RESET UP
N1     INC  R3            *MOVE PRINT POSITION 1 TO RIGHT
       CI   R3,64         *CHECK RIGHT FOR OUT OF BOUNDS
       JLT  DRAW          *IF NOT, JUMP TO DRAW
       LI   R3,63         *IF IS, RESET RIGHT
       JMP  DRAW          *
************************
UPLEF  DEC  R4            *MOVE PRINT POSITION UP 1
       CI   R4,-1         *CHECK UP FOR OUT OF BOUNDS
       JNE  N2            *IF NOT, CHECK LEFT
       CLR  R4            *IF IS,RESET UP
N2     DEC  R3            *MOVE PRINT POSITION 1 TO LEFT
       CI   R3,-1         *CHECK LEFT FOR OUT OF BOUNDS
       JNE  DRAW          *IF NOT, JUMP TO DRAW
       CLR  R3            *IF IS, RESET LEFT
       JMP  DRAW          *
************************
DNRIT  INC  R4            *MOVE PRINT POSITION DOWN 1
       CI   R4,48         *CHECK DOWN FOR OUT OF BOUNDS
       JLT  N3            *IF NOT CHECK RIGHT
       LI   R4,47         *IF IS, RESET DOWN
N3     INC  R3            *MOVE PRINT POSITION 1 TO RIGHT
       CI   R3,64         *CHECK RIGHT FOR OUT OF BOUNDS
       JLT  DRAW          *IF NOT, JUMP TO DRAW
       LI   R3,63         *IF IS, RESET RIGHT
       JMP  DRAW          *
************************
DNLEF  INC  R4            *MOVE PRINT POSITION DOWN 1
       CI   R4,48         *CHECK DOWN FOR OUT OF BOUNDS
       JLT  N4            *IF NOT, CHECK LEFT
       LI   R4,47         *IF IS, RESET LEFT
N4     DEC  R3            *MOVE PRINT POSITION 1 TO LEFT
```

```
       CI    R3,-1          *CHECK LEFT FOR OUT OF BOUNDS
       JNE   DRAW           *IF NOT, JUMP TO DRAW
       CLR   R3             *IF IS, RESET LEFT
       JMP   DRAW           *
**************************
RELAY  JMP   LL             *A RELAY BECAUSE OF 'OUT OF RANGE'
**************************
**************************SCREEN COLOR
SC     CI    R5,>000F       *COMPAIR TO >F (LAST COLOR)
       JNE   $+4            *
       CLR   R5             *IF >F THEN RESET TO 0
       INC   R5             *IF NOT >F THE INCREASE BY ONE
       MOV   R5,R0          *MOVE REG 5 INTO REG 0
       AI    R0,>0700       *ADD >0700 TO REG 0
       BLWP  @VWTR          *WRITE THE NEW SCREEN COLOR
       LI    R13,>2000      *DELAY LOOP
       DEC   R13            *
       JNE   $-2            *
       JMP   RELAY          *
**************************
**************************BLOCK COLOR
BC     AI    R14,>1000      *ADD ONE TO CURRENT BLOCK COLOR
       LI    R13,>2000      *DELAY LOOP
       DEC   R13            *
       JNE   $-2            *
**************************
**************************DRAW
DRAW   LI    R15,2          *PUT 2 IN REG 15
       MOV   R3,R7          *MOVE COLUMN VALUE INTO REG 7
       CLR   R6             *CLEAR REG 6
       DIV   R15,R6         *DIVIDE REG 6 BY 2. QUOTIENT IS PUT IN REG 6
**************************WITH REMAINDER PUT IN REG 7
       MOV   R4,R9          *MOVE ROW VALUE INTO REG 9
       CLR   R8             *CLEAR REG 8
       LI    R15,8          *PUT 8 INTO REG 15
       DIV   R15,R8         *DIVIDE REG 8 BY 15. QUOTIENT IS PUT IN REG 8
**************************WITH REMAINDER PUT IN REG 9
       SLA   R6,3           *ShiftLeftArithmetic SAME AS MULTIPLYING BY 8
       SLA   R8,8           *ShiftLeftArithmetic SAME AS MULTIPLYING BY 256
       A     R6,R8          *ADD REG 6 AND REG 8, ANSWER PUT IN REG 8
       A     R8,R9          *ADD REG 8 AND REG 9, ANSWER PUT IN REG 9
       AI    R9,>0800       *ADD REG 9 TO >0800. (>0800 IS START OF PATERN
**************************DESCRIPTOR TABLE)
       MOV   R9,R0          *MOVE REG 9 INTO REG 0
       CLR   R1             *CLEAR REG 1. THE VALUE READ FROM THE PATTERN
**************************DESCRIPTOR TABEL WILL BE PUT INTO REG 0
       BLWP  @VSBR          *READ THE BYTE
       MOV   R1,R10         *STORE THE BYTE IN REG 1, IN REG 10
       CI    R7,0           *CHECK REMAINDER OF FIRST DIVISION TO SEE IF
**************************LEFT OR RIGHT BYTE IS TO BE CHANGED
       JEQ   LD             *IF ZERO THE JUMP TO LEFT DIGIT
       ANDI  R10,>F000      *RIGHT DIGIT TO BE CHANGED SO CLEAR THE RIGHT
**************************RIGHT DIGIT, BUT DO NOT CHANGE LEFT DIGIT
       SRL   R14,4          *ShiftRightLogical SHIFT ALL DIGITS FOUR PLACES
**************************TO THE RIGHT
       AB    R14,R10        *AddBytes
       SLA   R14,4          *SHIFT BACK FOUR PLACES TO LEFT
AL     MOV   R10,R1         *MOVE THE NEW COLOR INTO REG 1 SO IT CAN BE
```



```
**************************WRITTEN TO THE PATTERN DESCRIPTOR TABLE
       BLWP @VSBW           *WRITE IT
       JMP  RELAY           *JUMP TO RELAY (ELSE OUT OF RANGE)
LD     ANDI R10,>0F00       *CHANGE THE LEFT COLOR DIGIT, RIGHT UNCHANGED
       AB   R14,R10         *WRITE THE NEW COLOR TO REG 10. DO NOT SHIFT.
**************************IS IN CORRECT PLACE
       JMP  AL              *LEFT DIGIT UPDATED, JUMP BACK AND WRITE IT
       END
```

((EDITORS NOTE: This concludes the series by Steve Peacock. We welcome any further articles on assembly language.)

Geneve Support Article: Don Jones

Howdy doody there, Sports Fans! How are you surviving the cold weather these days? I must admit that it is kinda difficult to get very cozy next to a computer, but true computer freaks keep on hackin' and crunchin' regardless of the climate! At this time, I am looking for an old pair of cotton gloves, with the finger tips removed. In this way, I can keep my fingers warm and still retain my touch typing sensitivity.

Well, this month, we are going to get seriously into some useful Geneve activities, but first some important and unfinished business:

If you have ever bothered to read my articles, in the past, you will have noticed that I often attempted to express appreciation to the many individuals who have made sacrifices, of some sort, to help me to do my job. Here, I must admit to a most unfortunate oversight. I am speaking about the person who has taken on the responsibility as our volunteer coordinator. You may remember, in the past, we used to have membership drives, where local members would distribute membership information to TI owners, in their own zip code areas. The person who volunteered to coordinate this activity for me was Pat Vetter. In all of my last articles as the membership chairman, in which I made statements of thanks and of appreciation, I neglected to mention her. It was Pat Vetter who placed a 1000 labels on post cards, which went out to local TI owners, just before the Faire. I regret the ommission and apologize for it. This particular job was a very important one for me at a very critical time, during my term as Faire Chairman. Pat, I truly regret the error. Thanks for everything.

In the last issue of our newsletter, there was a snide and oblique remark made referring to those contributors whose articles are rather "long winded." Well, let me make it clear that I would prefer be known as being windy rather than having smell of bugs on my breath! (How about a cheer for THE BONE CRUSHER!!!) Now, on to the serious stuff:

First, let me make it clear that last month's cover art was done on a Geneve, using the Myart program. Even though this was mentioned on page two, I just wanted to reinforce the fact even further.

Last month, an anonymous article appeared, regarding the Geneve. Coincidentally, it was printed in the same issue in which my first article appeared. This article contained some good information, which I, too, was intending on bringing to your attention, in this article. The emergence of this article doesn't bother me in the slightest. It only makes me feel that the efforts of Geneve owners, towards receiving some respect, recognition, and balanced criticism, for the 9640, are being successful. Also, by having the other article, with its support information, printed, frees me up to deal with other important aspects of the Geneve. I therefore refer you to this useful article, which was printed on pages 30 to 32, of last months newsletter. At the same time, I feel that some clarifications, relative to some of the information, contained in that article, are in

order, to wit: "There is no way to find the built in Ramdisk. And, DOS can't find the Horizon RAM disk." These statements just simply aren't true.

Using DOS 1.0 and GPL loader .98, finding the the built in RAM disk or a Horizon RAM disk is no problem at either the DOS level or the GPL (TI mode) level. In fact, the latest version of DOS was written with the idea of helping you to find your Horizon RAM disk, but in order to use your Horizon RAM disk (HRD) with your Geneve, your HRD must sit at the CRU 1400 and take the drive name, DSK6. If you do this, you will have no trouble "finding" your HRD, and you will not have to make any alterations of the DOS, with a sector editor. (This was necessary with DOS versions .97 and .98, but it is totally unnecessary with the current versions of DOS.) Later in this article, I will print for you an AUTOEXEC file which easily finds your built in RAM disk at the DOS level.

Finding your built in RAM disk, at the GPL (TI mode) level, has never been a problem; it has always been there. All that one needed to do was write to it, but, with the present level GPL loader, there is a small problem: The RAM disk is not properly formatted. This is a bug in the GPL loader. If you look at the built in RAM disk (DSK5), using a disk manager, it may indicate that something like 6962 sectors have been used and 1436 sectors are still available. This is not correct; only 718 sectors are available, and if you attempt to write beyond that number, you will end up writing over your DOS, which is loaded into this same memory area, and thereby cause your machine to crash. Still, there is a way to prevent this: When you boot up the TI mode, use a disk manager to initialize DSK5. Format it as a double sided, single density disk, but do not bother to verify the sectors. You will then come up with 718 free sectors, with 2 sectors used. You can name this RAM disk anything that you want. (Out of my regard for tradition, I usually call it RAMDISK.) Then, for the remainder of the time that you remain in the TI mode, you will have, at your beck and call, 718 sectors free to use at your discretion. You can save programs to this space, and then call them from this disk emulation. You can temporarily save your working files, that you are writing, using Myword or TI Writer, into this space. You can even load your entire TI Microsoft Multiplan cartridge to this area. In fact, you can even "archive", "unarchive," compress, or decompress files to and from this area. By doing this, you will save wear and tear on your mechanical drives. But, whatever you do, you must remember to save any altered programs, results, or files to disk. It is important that you do this, because when you turn off the power, you will "wipe" the entire contents of this area from memory; the one disadvantage with this space is that you lose it when you lose power or re-boot your DOS, still it can be a very useful tool. I use it whenever I do any telecommunications. Whenever I wish to do an upload, I will first load the file(s) to the RAM disk area, using a disk manager. When I log-on to the b.b.s., that I am working with, I transfer the file(s) from the RAM disk rather than my floppy drive. I do this for two reasons: 1.) The RAM disk is faster than the mechanical drive, and 2.) it saves wear and tear on my mechanical drive. Also, when I download, from a b.b.s., or an individual, I write the file(s) to the RAM disk, for the same reasons as given above. When the communications session is over, I then transfer the file contents to a floppy disk, for a more permanent form of storage.

Here, let us talk about the creation of the BATCH file. A BATCH file is merely a file which is a program that is written using a computer's text editor (Myword or TI-Writer). The computer reads it at the DOS level. These files are very useful as they can make the machine do all sorts of "house-keeping" functions. By assigning these regular routines to BATCH files, we can save ourselves a lot of extra typing, work, and hastles. Here is an example that I have written for the purpose of example and demonstration. By being on the same disk (floppy or RAM) as my DOS (SYSTEM/SYS) and having the name AUTOEXEC, this file will be executed as soon as the DOS is "booted." Please note, there is only one command per line, the commands are entered in upper case (though lower case will also work), each command must start in column zero (0), and all formatting commands (carriage returns) must be stripped from the file before it is run. I urge each Geneve user to type this file out, save it to disk, and run it with his/her DOS. Later, you can experiment and change the commands so that you can customize this file to meet your

personal needs and your system's requirements. I will follow each command with a short explanation:

ECHO OFF (Keeps the command from being read on the CRT, during its execution)
TIMODE (Allocates 128K of memory for the execution of TI 99/4A programs)
RAMDISK 180 (Allocates 180K of memory for the built in RAM disk)
SPOOL 128 (Allocates 128K of memory for the built in printer spooler function. Using the current DOS, version 1.0, and GPL loader, version .98, I strongly suggest that you allocate at least 128K of memory for your spooler for both the functioning of Myword and Myart. I have found that with an insufficient amount of memory given to the print spooler [buffer, attempts to print a file, from the FOrmatter, in Myword, will also lock up the machine. I have also been told that if you attempt to print a Myart picture with an insufficient amount of memory allocated to the printer buffer [spooler, you would lock up the machine. The reason for this, as I was told, is that the machine is so fast that, during some printing operations, only the built in spooler is fast enough to keep up with it. Therefore, as long as you allocate a sufficient amount of memory, to the spooler, all print functions work just fine.)
ASSIGN G=DSK6: (Changes the prompt "G" to DSK6. The colon [: is essential to this command:)
ASSIGN E=DSK5: (Changes the prompt "E" to DSK5. This also happens to be your built in RAM disk. This command allows you to "find" your built-in RAM disk at the DOS level of operation.)
LASTDRIVE = L (Allows you to use letters A-L as names for drives.)
MODE 80 (Changes the screen output from 40 columns to 80 columns. This command should be used only if you are using an 80 column monochrome or RGB monitor. Relative to monitors, I suggest that you read the article submitted by my friend, Jan Joel Janowski, which is probably printed elsewhere in this newsletter.)
ECHO Please load your disks into the floppy drives now. ("ECHO" allows the line following it to be read from the screen.)
PAUSE (Causes the system to wait for you to press a key, and it will leave a message to the effect of asking you to do so.)
CLS (Clears the screen.)
DIR /W (Gives you a directory of the main drive [drive 1. The "/W" causes a wide directory display. This display gives only the file names, and lists them horizontally across the screen, rather than vertically. This allows more files to be listed, without the screen scrolling.)
PAUSE (I put the pause in to allow me a chance to study the directory of each disk.)
DIR B: /W (Gives you a directory of drive #2.)
PAUSE
DIR C: /W (Gives you a directory of drive #3.)
PAUSE
DIR E: (Gives you a directory of your built in RAM disk.)
PAUSE
DIR G: /W (This will be a directory of my Horizon RAM disk, sitting at CRU 1400 and emulating disk drive #6.)
ECHO Hello, Don! How are you today? It's nice to be able to
ECHO work with you again. I think that we will make a great
ECHO team, don't you? Have a nice day, Don! (Here, I was just being cute. It is a message that Geneve will give each time that the machine is turned on.)
Time (Gives you the current time, as recorded by the computer, and allows you to change it.)
Date (Gives you the current date, as recorded by the computer, and allows you to change it.)
CLS
ECHO (Gives you a blank line.)
ECHO ON (Turns the ECHO function back on.)
(The following is merely a minor graphic which was created by a person with no artistic talents at all. You should not feel obliged to enter this into your file. I guess that

I did it because I was bored and wanted something to do, at the time. The REM command displays a message line, if the ECHO is turned on.)

```
REM            . ..... .
REM           .       .
REM             / ?
REM            / -
REM           /
REM          /  . /.
REM              .
REM             oo
REM                /
REM               /
REM
```

PAUSE Press any key to load GPL (Pauses the system one last time and prints the above message. This gives me one last chance to stop the process, by pressing CTRL C or CTRL BREAK [SCROLL LOCK. This will allow you to stop the execution of the BATCH file.)
G: (This changes the default prompt to "G" instead of "A". I only do this because my HRD has the name DSK6, and DSK6 has been assigned the "G" prompt. What is important for me is the fact that I have installed my GPL on my HRD. If you don't have one, be sure that you don't use the "G:" command. Instead, place your disk, with your GPL on it, in drive 1.)
GPL (Loads the GPL loader from the current default prompt.)

The above represents my initial efforts at writing a BATCH file. By running this file, with my DOS, I am saved a lot of boring and redundant typing. This file meets my personal and system needs. I submit it so that you may use it as an example to write your own. In future installments, of this column, I will make further additions and changes to this BATCH file.

The above mentioned article, in last month's newsletter, tells you how to write your BATCH files at the DOS level. This is all well and good, except that, to the best of my knowledge, you must always write it from scratch. In other words, you can't load and alter an already existing one. This is the reason that I write my BATCH files with Myword. Be sure, when doing it this way to be in the fixed mode by striking CTRL 0, so that you will have a hollow cursor. Also, set your tabs so that your left margin is all the way to the left of the screen. When you have finished, don't simply save the file to your disk. Rather, do a PF (Print File), and when you are asked for a device, indicate CDSK1, or whatever disk you want to save it to. When you do this, don't forget to preceede the location with the "C". This proceedure will strip all control characters from the file.

Here, I would like to discuss the work of a very innovative user/programmer named Jim Schroeder. When the 9640 first came out, Jim modified some existing 99/4A programs, so that they would work on the 9640. He also wrote some original "fair ware" programs, which help to make the 9640 into a more useful instrument. I am very impressed with this man's work.

One of the existing 4A files, which he has altered, is John Johnson's HRD menu program. This program gives you two screens (which are toggled by pressing the space bar), with a total of 15 different program file names, that you may alter and enter, by merely pressing FCTN 5. The whole file is then written (SAVEd) to your built in RAM disk, DSK5. (From there, you can remove it and save it on a floppy disk.) This neat loader utility will allow you to not only load program files, that are installed into the program, but it will allow you to catalogue any of your existing drives. Then, by moving the high-lighting cursor, with the arrow keys, you can indicate the file which you want to load. If you press ENTER, you will then be returned to the program title screen (which also includes a real-time, twenty-four hour clock, which also shows the tenths of a

second, with the day of the week (1 to 7), the year, the month, and the day. Then, by pressing the number 3, you will find the title of the file, which you high-lighted, in the directory mode. Pressing ENTER will automatically load it! (If it is a DV/80 file, pressing the number 2 will display it.) In order to fully appreciate and take advantage of all of the features and benefits of this program, you will need to refer to the documentation, which comes with the HRD.) This program, which was written by John Johnson, is also one of the most innovative programs for the TI 99/4A. Without it, the HRD loses a lot of its appeal. Also, to the best of my knowledge, this is a truly "free-ware" program, that is, it is given with no expectations for any future renumeration. Consequently, Jim Schroeder is not asking for any payment for his modification of this program. This program is one of the nicest things that you can use with your Geneve. I believe that its name is 9640 MENU, at least that is the name which it has had in the Geneve download section of the group's b.b.s. Take this program; try it, you'll like it! (Next month, I will discuss Edward Hallett's use of this program module in his innovative menu/loader program.)

Well, Sports Fans, I guess that it's time for Krome Dome Jonz to mosey off, into the wild blue yonder of the computer world. I really have a lot more to say, but I have been restricted by our president and editor to a mere four pages, and I have so much more to say! Maybe this is a good idea; I don't want to cause our editor a problem, which would cause her to punch me out. Also, it probably isn't a good idea to do too much at one time; too much is just as bad as not enough. I therefore gracefully accept the restrictions, and I shall hope to have more good info for you, in the next issue. Incidentally, if you have any questions, please feel free to send them to me, in care of our post office box number. I will attempt to answer any questions asked, in the pages of this newsletter.

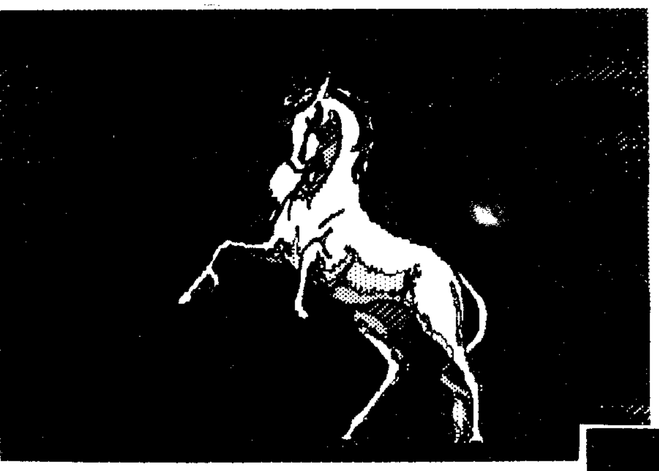
I also hope to see as many of you, as possible, at our next regular meeting. I will be teaching my first PR Base class. It will be open to all Geneve and 99/4A users, as the program is completely portable. (I will be passing the hat for the author, at the SIG. Though the contribution will be voluntary, PLEASE bring the $10.00 price, which the author is asking. When you can see what a great program this is, you will find this cost to be very cheap. The group will even save you trouble by taking the responsibility for sending the money off to the author.) This meeting will also have, "The Battle of the Machines!" It is here that I will have, my Geneve, my HRD, and my software, to show that the machine can do what I say it can. If you come, you will find out why I'm also called, THE BONE CRUSHER!

enditenditenditen

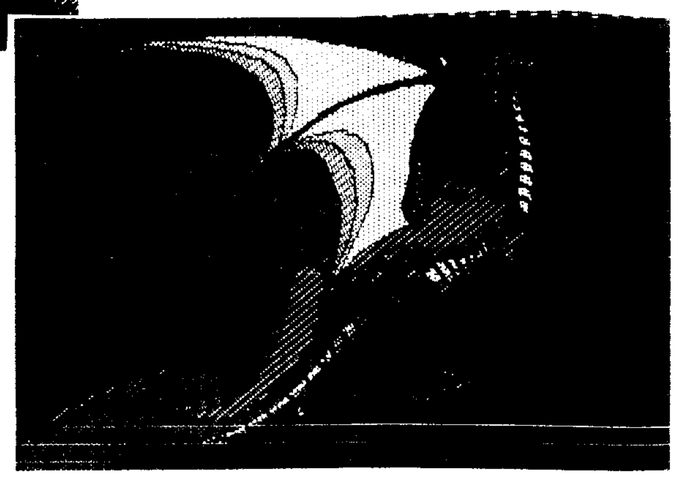
```
THE PROGRAM ::
1 CALL CLEAR :: ! ZLARGEKEYS
2 CALL SPRITE(#1,90,2,94,126)
3 CALL SPRITE(#2,91,2,108,126)
4 CALL SPRITE(#3,92,2,94,142)
5 CALL SPRITE(#4,93,2,108,142)
6 CALL MAGNIFY(2)
7 CALL JOYST(1,X,Y)
8 CALL MOTION(#1,-Y,X)
9 CALL MOTION(#2,-Y,X)
10 CALL MOTION(#3,-Y,X)
11 CALL MOTION(#4,-Y,X)
12 DEF D$(X)=CHR$(3*X+6.5*(X AND 2)+48)
13 DEF CD(X$)=ASC(X$)-55+7*(ASC(X$)AND 32)/32
14 F=0 :: R$="" :: INPUT "ONE KEY ":I$ :: IF R$=I$ THEN 14 :: CALL CHARPAT(ASC(I$),J$)
15 FOR I=1+F TO 16 STEP 2 :: M=CD(SEG$(J$,I,1)) :: R$=R$&RPT$(D$((M AND  12)/4)&D$(M  AND
3),2)  :: NEXT I  :: IF F THEN 16 :: F=1 :: GOTO 15 16 CALL CHAR(90,R$ :: CALL CLEAR ::
DISPLAY  AT(18,7):CHR$(90)&CHR$(92)  :: DISPLAY  AT(19,7):CHR$(91)&CHR$(93)  17  PRINT
I$;"=CHR$(";ASC(I$);")";J$;"=":R$: : :: GOTO 7
```

THATS IT. TRY IT , YOU MIGHT LIKE IT !

TONY ZLOTORZYNSKI 046



These pictures were done with My-Art in the high-res mode on the Geneve.



MYARC has announced these products for release during 1988: hard and floppy disk controller, GEME (Graphic Enhanced Multi-Tasking Environment a windows-like program), a CAD program, a mouse supported disk manager, Forth and an upgrade to MG's Advanced Diagnostics, a flight simulator, a MIDI program, an upgrade to My-Art, My-Numbers, and a Programmers Development System.

FROM THE KANKAKEE USERS GROUP

REACHING FOR IT

From the North Shore

By:- Paul

STAR PRINT-HEAD REPAIR:-

One of the attractive features of the Star Micronics Gemini series printers <and also some of the later models> is the "user replaceable" print-head. As it turns out, there are a couple of drawbacks to this. One is the price of the print-head, the last one of which I bought was, in 1983, $56. The other is pretty serious, and that is the unavailability of replacement heads. When my 15X head went out, I requested a replacement from three local suppliers, and one on the mainland, and 11 months later, I have yet to see one. Being in the position of needing to use my printer, and at the same time having to wait for the ordered part, <which at the time I figured would be at worst a week>, I decided to attempt a temporary patch-up. That temporary fix has lasted till now & shows every indication of being as good as new. And since the head on my 10X just developed the same problem, I have gone ahead, and repaired in the same way, and I figured that the solution would be of use to other users of Star Micronics Printers.

The problem that has occured in my print-heads, is that the guide, for the impact-matrix pins <that make the "on-bits"> comes loose. This guide is small <1x4x6 mm> piece of red glass or corundum <ruby> that is inset flush with the front of the print-head body. The symptoms when this happens are that the characters printed lose their sharpness, and/or the head tends to drag the ribbon on the paper, making a gray smudge on the paper wherever the head travels, no-matter how you set the head for paper thickness.

However the pin-guide is held in place at manufacture, it can be refastened in place by gluing it. It takes a bit of care to do this, because no glue must be allowed to get into the pin slot. I have found the easiest way to deal with the head is to completely remove it from the printer. Get comfortable at a work table, and with tweezers, a needle <or pin> and some paper towel, lift the pin-guide out of the head. Now wipe the guide clean of ink & dust. It may be necessary to clear the pin slot with the corner of a piece of paper. Then, with the needle, carefully clean out the recess in the head <where the guide goes> to get out all the inky ribbon-lint, taking care to get the corners all clear and taking special care NOT TO BEND ANY OF THE PINS.

Now, GENTLY place the pin-guide over the recess, precisely lining up the pin-slot with the row of impact pins. With a finger-tip press lightly downward, and wiggle the guide until the pins slip into the slot. <The guide will sort of rock on the pins until they line up and then it will "fall" into place in its recess.> The guide is seated properly when its front is flush with the rest of the head and all of the pins are just flush with it. <The pins must not be recessed or protrude.>

Now dip the needle in some glue and apply it to the crack around the outside edge of the guide. <I used a plastic glue, like the kind used for models, but epoxy should also work. <Crazy glue is too fluid and may get on the pins.> Be sure the glue is fluid enough to go into the crack between the guide and the head, but do not allow it to get in the slot area. Let the glue dry, & re-apply until the crack is filled completely after drying. It is OK if the glue builds up a ridge, as long as it doesn't get on the pins.

After thoroughly drying, use a SHARP knife with a gentle sawing motion to slice the excess glue off of the face of the print-head. Be sure that the front surface is flat and flush with the impact-pins. Then reinstall the print-head in head carriage, and the printer is ready to go back on line.

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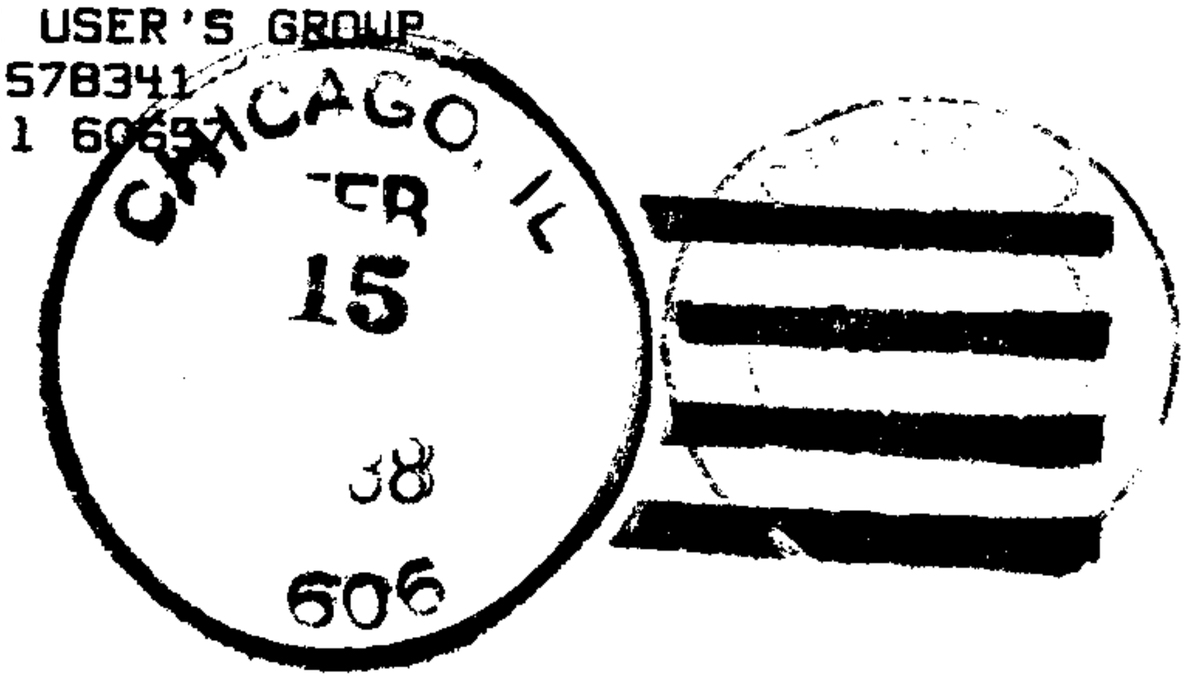

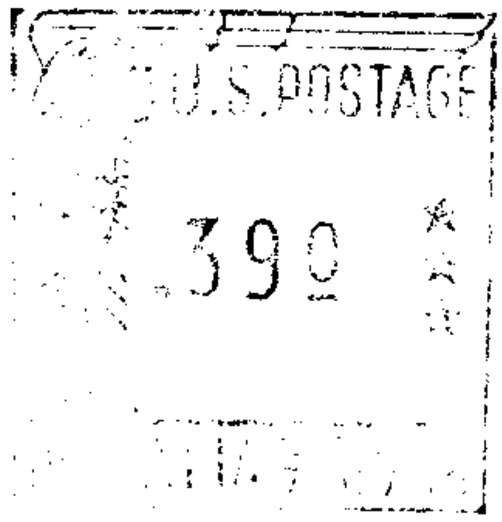

REMARKS

Carole Goldstein

Well, I did receive the new software before going to press with this issue. And it definitely does make a difference. The Geneve is starting to work like it should. I guess infinite patience does pay off eventially. This is the way the machine should have been upon its release. There is no reason for a company put out a product as ridden with problems as Myarc had done.

There seems to be about 10 Geneve users who sat in on the newly formed Geneve SIG. Admittedly, not all of us have had the same problems, but it was nice to talk to others and find solutions together.

Also at this point of my experience with the machine, I am starting to see some things that really impress me. The graphic capability that has been shown is truely amazing. The Myart pictures (some of which are within these pages) and the GIF format pictures are breathtaking. They have finally shown what this machine may be all about. Also, we are starting to see new software written specifically for the 9640.

Not to forget about the 99/4A, there are pages of reviews and information on new software within Paul Farber's and Bob Demeter's columns. The graphic program that Bob demonstrated at the last meeting was really refreshing and enjoyable.

Our next meeting will be an experiment. We will be splitting up after the first hour for several special interest groups after which the library and vendors will once again open their tables. This will give some of the people who are not able to stay late, a chance to get involved in their specific interest group. The success or failure of this format will help us to plan future meetings.